

VEHICLE DETECTOR WITH ENVIRONMENTAL ADAPTATION**ABSTRACT OF THE DISCLOSURE**

A reference value used in a vehicle detector is checked and adjusted. The vehicle detector determines the speed of a vehicle which it has detected and then makes a sample measurement after the vehicle has left the detection area of its inductive sensor. The timing of the measurement is based on the speed of the vehicle. The sample measurement is compared to the reference value, and adjustment of the reference value is made accordingly. In order to identify the cause of changes in the sensor drive oscillator signal frequency, the frequency of the oscillator signal is measured while connected to a dummy sensor not affected by vehicles. The reference value also is adjusted to reflect slow changes (drift) in sensor drive oscillator frequency. To identify changes in sensor drive oscillator frequency caused by mechanical difficulties which require maintenance activity to correct, a rate of frequency change of the sensor drive oscillator signal is determined over the plurality of measurement scanning segments.